

**IN THE CLAIMS:**

Claim 1 (Currently Amended): A method for forming a dual damascene line structure, comprising the steps of:

forming an inter-metal dielectric including a first region and a second region on a semiconductor substrate;

forming a first hard mask material layer on an entire surface of the inter-metal dielectric;

removing the first hard mask material layer on the first region; *to expose*

*A'* forming a second hard mask material layer on an entire surface of the inter-metal dielectric with a metallic material identical to that of the first hard mask material layer, *with hard and on the bottom*

wherein the second hard mask material layer is deposited on an inner sidewall in the shape of a spacer within the first region of the first hard mask material layer to form a curved surface;

*by* forming a ~~hard~~ mask to remove a portion of the first hard mask material layer on the second region; *on the top*

etching the inter-metal dielectric of the first region to a first thickness using the

hard mask; *with a portion of the mask to form a via hole having a positive slope*  
exposing the inter-metal dielectric of the second region; and

etching the exposed inter-metal dielectric to simultaneously form a via hole  
having a positive slope by using an inner profile of the mask and a trench having the via  
hole.

Claim 2 (Canceled)

Claim 3 (Canceled)

Claim 4 (Canceled)

Claim 5 (Currently Amended): A method for forming a dual damascene line structure,  
comprising the steps of:

sequentially forming a diffusion barrier film, an inter-metal dielectric including a  
first region and a second region, and a first hard mask material layer on a semiconductor  
substrate having a lower metallic line formed within an insulating layer;

selectively removing the first hard mask material layer on the first region using a  
photoresist pattern; *to expose the a portion of the first hard mask material*  
depositing a second hard mask material layer on an entire surface of the inter-

metal dielectric with a metallic material identical to that of the first hard mask material  
layer, wherein the second hard mask material layer is deposited on an inner sidewall in  
the shape of a spacer within the first region of the first hard mask material layer to form a

curved surface;

*a pattern used*  
removing the first hard mask material layer on the second region to form a ~~hard~~  
mask having a double pattern;

etching the inter-metal dielectric of the first region to a first thickness using the  
~~hard~~ mask;  
*inner profile of the mask to form a via hole having a positive slope,*  
removing the ~~hard~~ mask on the second region; and

*Final*  
etching the inter-metal dielectric to simultaneously form a via hole having a  
positive slope by using an inner profile of the mask and a trench having the via hole.

Claim 6 (Original): The method according to claim 5, wherein the inter-metal dielectric is formed of a low inter-metal dielectric material.

Claim 7 (Currently Amended): The method according to claim 5, wherein the ~~hard~~ mask is formed of one of Ti, TiN, Ta, TaN, and W.

Claim 8 (Currently Amended): The method according to claim 5, wherein the ~~hard~~ mask is formed at a minimum thickness enabling the inter-metal dielectric to be etched.

Claim 9 (Original): The method according to claim 5, wherein the step of removing the first hard mask material layer on the first region is performed using a photoresist pattern at a minimum thickness enabling only the first hard mask material layer to be etched.

Claim 10 (Original): The method according to claim 5, wherein the step of etching the second hard mask material layer is performed using one of a plasma including an activated gas consisting mainly of  $\text{Cl}_2 + \text{BCl}_3$  and a plasma including an activated gas consisting mainly of  $\text{SF}_6$ .

Claim 11 (Original): The method according to claim 5, wherein the step of depositing the second hard mask material layer forms an inner sidewall within the first hard mask material layer on the first region in a curved spacer shaped surface.

Claim 12 (Original): The method according to claim 11, wherein a thickness of the deposited second hard mask material layer is the same as a thickness of the first hard mask material layer.

Claim 13 (Original): The method according to claim 5, wherein the step of removing the first hard mask material layer on the second region forms a photoresist pattern at a minimum thickness enabling only the deposited second hard mask material layer to be etched.

Claim 14 (Original): The method according to claim 5, wherein the first hard mask material layer on the second region is simultaneously removed when the second hard mask material layer on the first region is etched to expose the inter-metal dielectric.

Claim 15 (Currently Amended): The method according to claim 5, wherein the inter-metal dielectric is ~~formed~~ etched to form the via hole by using a plasma including a first activated  $C_aF_b + C_xH_yF_z$  (wherein a, b, x, y, and z are integers) gas combined with a second gas including  $O_2$ ,  $N_2$ , and Ar.

Claim 16 (Currently Amended): The method according to claim 5, wherein the via hole is formed to have a positive slope by using an inner profile of the ~~hard~~ mask.

Claim 17 (Canceled).

Claim 18 (Original): The method according to claim 1, further comprising the step of removing the second hard mask material remaining after forming the via hole and the trench.

Claim 19 (Original): The method according to claim 1, further comprising the step of depositing a metallic material within the via hole and the trench to form a plug and an upper metal line.

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